

A. Claim 1

Applicants submit that claim 1 is patentable over the cited reference. For example, claim 1 recites an ink level detector for detecting at least a low ink state in which quantity of ink stored in a sub-tank is smaller than a predetermined value. Further, an ink consumption counter acquires the total quantity of ink ejected or discharged by the recording head. When the ink level detector detects the low ink state, and the value acquired by the ink consumption counter reaches a predetermined count value, ink is supplied to the sub-tank by the ink cartridge.

The Examiner maintains that Cook discloses the above features. However, Applicants believe that the Examiner is misinterpreting and/or misapplying the cited reference. For example, a primary drop count value, corresponding to an initial value of ink in primary ink reservoir 4, is stored in memory device 12 (Fig. 1; col. 14, lines 29-31). A filling operation for filling primary ink reservoir 4 is commenced only when the primary drop count value is less than a first minimum threshold level value (col. 14, lines 60-63 and col. 15, lines 15-52). The first minimum threshold value represents a calculated amount of ink required to carry out a particular print request (col. 14, lines 63-65).

Assuming *arguendo* that the primary drop count value of memory device 12 discloses the claimed ink consumption counter, ink is only supplied from remote ink reservoir 14 to primary ink reservoir 4 when the primary drop count value is less than the threshold value. However, as recited in claim 1, ink is supplied to a sub-tank when both an ink level detector detects a low ink state and the ink consumption counter reaches a predetermined value.

The Examiner maintains that ink level sensors 30a-30b correspond to the claimed ink level detector (Fig. 1). However, Applicants believe the Examiner is misinterpreting and/or misapplying the cited reference. Sensors 30a-30b are basically used to verify that the primary drop count value in memory 12 is accurate when the printer is turned ON, or after a printing task (col. 14, lines 35-56 and col. 15, lines 12-14). As stated in Cook, the comparison between the primary drop count value and ink level sensed by sensors 30a-30b determines the “integrity” of the measurements produced by the ink level sensors 30a-30b (col. 14, lines 22-26). However, the ink level sensed by sensors 30a-30b is not used as a condition for filling primary ink reservoir 4. Rather, as stated above, a filling operation is performed solely based on a comparison of the first minimum threshold value and the primary drop count value. The only function that the level sensors 30a-30b serve during a filling operation is to indicate when the primary ink reservoir 4 becomes full (col. 15, lines 53-61).

Therefore, contrary to the Examiner’s assertion, Cook fails to teach or disclose that ink is supplied to ink reservoir 4 when both a low ink level is detected by sensors 30a-30b and a primary drop count value acquired by memory device 12 reaches a predetermined value.

Accordingly, Applicants submit that claim 1 is patentable over the cited reference, and respectfully request the Examiner to withdraw the rejection.

B. Claim 3

Since claim 3 is dependent upon claim 1, Applicants submit that such claim is patentable at least by virtue of its dependency.

C. Claim 8

Since claim 8 recites a method utilizing features which are analogous to the features recited in claim 1, Applicants submit that claim 8 is patentable for at least similar reasons as set forth above.

D. Claims 9 and 10

Since claims 9 and 10 are dependent upon claim 8, Applicant submits that such claims are patentable at least by virtue of their dependency.

II. Rejection under 35 U.S.C. § 103(a) over Cook in view of EP 841 173 to Kobayashi et al. (“Kobayashi”).

Claims 2 and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook in view of Kobayashi. However, since claims 2 and 7 depend on claim 1, and Kobayashi fails to cure the deficient teachings of Cook, Applicant submits that claims 2 and 7 are patentable at least by virtue of their dependency.

III. Rejection under 35 U.S.C. § 103(a) over Cook in view of US 4,432,005 to Duffield et al (“Duffield”).

Claim 4 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook in view of Duffield. However, since claim 4 depends on claim 1, and Duffield fails to cure the

deficient teachings of Cook, Applicants submit that claim 1 is patentable at least by virtue of its dependency.

IV. Rejection under 35 U.S.C. § 103(a) over Cook in view of US 4,466,284 to Dumery (“Dumery”).

Claim 6 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook in view of Dumery. However, since claim 6 depends on claim 1, and Dumery fails to cure the deficient teachings of Cook, Applicant submits that claim 6 is patentable at least by virtue of its dependency.

V. Rejection under 35 U.S.C. § 103(a) over Cook in view of EP 1 097 814 to Tamura et al (“Tamura”).

Claims 6 and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook in view of Tamura. However, since claims 6 and 11 depend, either directly or indirectly, on claim 1, and Tamura fails to cure the deficient teachings of Cook, Applicants submit that claims 6 and 11 are patentable at least by virtue of their dependency.

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Amendment under 37 C.F.R. § 1.116
U.S. Application No. 10/024,643

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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